

COUNTRY	:	Bulgaria	H-21
CATEGORY	:		
ABS. JOUR.	:	RZKhim., No. 7 1960, No.	19637
AUTHOR	:	Babachev, N.	
INST.	:	Not given	
TITLE	:	The Technology of the Extraction of the Oil from Some Oleaginous Seeds	
ORIG. PUB.	:	Khranitelna Ironishlenost, 7, No 12, 86-88 (1958)	
ABSTRACT	:	<p>Analytical data are given for some seeds (cassia, rape, flax) on the content (in %) of impurities, moisture, shells, kernel, oil, and dry solids. Data are given on the oil yield from the above-indicated seeds and on the characteristics of the oils obtained. The amount and type of oil losses in the processing of the seeds are indicated. For Part I see RZKhim, 1959, No 18, 85962.</p> <p style="text-align: right;">M. Kaplan</p>	
CARD:	1/1	354	

BABADAGLY, A. Kh.

"Obstetrics at Home," Fel'dsher i Akusher., No. 3, 1948.

Cand. Med. Sci.

BABADAGLY, A.Kh., dotsent; VOLKOVA, Z.G.

Treatment of gynecological diseases at the Truskavets health resort with ozocerite associated with other factors. Akush.i gin. no.2:74-76 Mr-Ap '54.
(MLRA 7:6)

1. Iz akusherstko-ginekologicheskoy kliniki (zaveduyushchiy - professor A.V.Vikulov) L'vovskogo meditsinskogo instituta i kurorta Truskavets (direktor F.S.Pedotova).

(Genitourinary organs--Diseases)

(Truskavets--Health resorts, watering places, etc.)

BARADAGLY, V. A.

Gravitational tectonics of Molasses in the Darvaza Range region.
Izv. vys. uch. zav.; geol. i razv. 5 no.7:3-8 J1 '62.

(MIRA 15:10)

1. Problemnaya laboratoriya osadochnykh formatsiy i osadochnykh
rud pri Tashkentskom gosudarstvennom universitete imeni V. I.
Lenina.

(Darvaza Range region--Rocks, Sedimentary)
(Darvaza Range region--Geology, Structural)

BABADAGLY, V.A.

Hieroglyphs of the Neogene. Priroda 51 no.6:82-83 Je '62.

(MIRA 15:6)

1. TashkentSKIY gosudarstvennyy universitet im.
(Tajikistan--Paleontology)

BABADAGLY, V.A.

Deep diagenesis and initial metamorphism of Mesozoic and Cenozoic terrigenous formations in the Darvaza Range region (Obi-Khingou River). Nauch. trudy TashGU no.203:23-69 '62. (MIRA 16:8)

(Darvaza Range region---Geology, Stratigraphic)

BABADAGLY, V.A.

New mineral formations in progressive and regressive epidiagenesis
in a cross section of Cenozoic carbonate formations in the Darvaza
Range region (Obi-Khingou River). Nauch. trudy TashGU no.203:71-
89 '62. (MIRA 16:8)

(Darvaza Range region--Geology, Stratigraphic)

BABADAGLY, V.A.; PEDDER, Yu.G.; ATAULLIN, E.I.

Formation of the sixth Mavlisu anticline; northeastern Fergana.
Neftegaz. geol. i geofiz. no.8:33-35 '64.

(MIRA 17:9)

1. Glavnoye upravleniye gazovoy promyshlennosti pri Sovete Ministrov
SSSR i Sredneaziatskiy filial Vsesoyuznogo nauchno-issledovatel'skogo
instituta prirodnogo gaza.

POPOV, V.I.; MAKAROVA, S.D.; YURKOVA, Ye.M.; BABADAGLY, V.A.

Facies-paleogeographical maps of Paleogene formations in the South
Tajik Depression. Nauch. trudy TashGU no.256 Geol. nauki no.22:
52-55 '64 (MIRA 18:2)

POPOV, V.I.; BABADAGLY, V.A.

Facies-geographical maps of Neogene formations in the South
Tajik Depression. Nauch. trudy TashGU no.256 Geol. nauki
no.22:56-62 '64 (MIRA 18:2)

B. BADAGLY, V.A.; RAVIKOVICH, Kh.A.; KUDRYASHOV, Ye.V.; ATABEYEV, M.I.; ~~Printov~~ ^{uchastnye} GONCHAROV, E.S.; IONINA, I.N.,
ved. red.

[Lithology, tectonics, and oil and gas potentials of the northeastern margin of the Fergana Depression] Litologiya, tektonika i neftegazonostost' neogenovykh otlozhenii severo-vostochnogo borta Ferganskoi depressii. [By] V.A. Badagly i dr. Leningrad, Nedra, 1964. 181 p.

(MIRA 18:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut prirody i resursov. Sredneaziatskiy filial.

BABADAGLY, Viktor Aleksandrovich; POPOV, V.I., prof., otv. red.;
BRUSKIN, D.M., ved. red.

[Lithology of Cenozoic molasses in the Darvaza Range
region] Litologiya kainozoiskikh molass Fridarvaz'ia.
Leningrad, Nedra, 1964. 246 p. (MIRA 18:3)

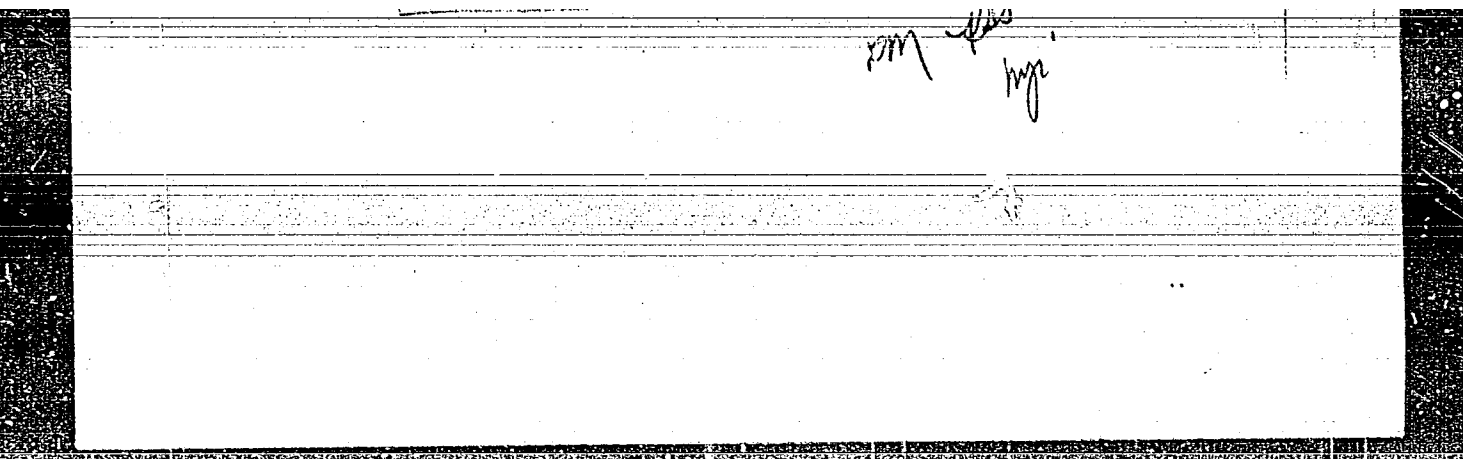
1. D'YACHKOV, I. N., PIS'MENNAYA, R.T., BARADAYEV, L.M.
2. USSR (600)
4. Karakul sheep
7. Re-examining the standard for karakul sheep. Kar.i.zver. No. 6 1952.
9. Monthly List of Russian Accessions. Library of Congress, April 1953, Uncl.

W. A. D. D. L. H. N. R. V. H. P. I. V., P. I. I.

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APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000102810002-7"

AUTHOR: Babad-Zakhryapin, A. SOV/78-3-8-41/48

TITLE: The Structure of 12-Phosphorus-Wolframate-Anions in Aqueous Solutions (Stroyeniye 12-fosforovoi'framat-anionov v vodnykh rastvorakh)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr 8, pp. 1970-1971 (USSR)

ABSTRACT: By means of radiographic investigation the structure of the anions of 12-phosphorus-tungstic acid was studied in aqueous solutions at the proportion $(\text{PW}_{12}\text{O}_{40})^{3-} : \text{H}_2\text{O} = 1 : 65$, in diluted solutions at the proportion $(\text{PW}_{12}\text{O}_{40})^{3-} : \text{H}_2\text{O} = 1 : 140$ and $(\text{PW}_{12}\text{O}_{40})^{3-} : \text{H}_2\text{O} = 1 : 280$. Microphotometric curves were plotted of the diffraction-pattern of the above mentioned solutions. The results prove that the anions of 12-phosphorus-tungstic acid are similar to the solid phases. There are 2 figures, 1 table, and 2 references, 1 of which is Soviet.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry, Academy of Sciences, USSR)
Card=1/2

AUTHOR: Babad-Zakhryapin, A. A.

SOV/78-3-10-15/35

TITLE: X-Ray Analysis of the Dehydration Process of Crystals of 12-Phosphoric-Tungstic Acid (Rentgenograficheskoye issledovaniye protsessa obezvozhvaniya kristallov 12-fosfornovel'framovoy kisloty)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 10, pp 2313-2319 (USSR)

ABSTRACT: The dehydration process and structure of atoms and molecules of the dehydrated products of 12-phosphoric-tungstic acid were analyzed by the radial distribution method. The following hydrates of 12-phosphoric-tungstic acid were investigated: $H_3PW_{12}O_{40} \cdot 29 H_2O$, $H_3PW_{12}O_{40} \cdot 23 H_2O$, $H_3PW_{12}O_{40} \cdot 11 H_2O$ and $H_3PW_{12}O_{40} \cdot 5 H_2O$. The dehydration process was carried out in the air at 200-250°C, and in the vacuum at 150-200°C. The results show that anion $(PW_{12}O_{40})^{3-}$ is stable and cannot be destroyed in the solid phase up to 400°C. The anion is not destroyed before a temperature of 700°C has been reached, thus producing a new crystal phase that

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X-Ray Analysis of the Dehydration Process of Crystals of 12-Phosphoric-Tungstic
Acid

SCV/78-3-10-15/35

has a structure in which the octahedron of WO_6 are arranged in the same way as in the structure of ReO_3 . After having been heated for two hours, a structure is formed at $400^\circ C$, in which the distance $W-O = 2,0 \text{ \AA}$, and the distance $W-W = 3,6 \text{ \AA}$. The distance $W-W = 5,5 \text{ \AA}$ is characteristic of anion $(PW_{12}O_{40})^{3-}$. At $700^\circ C$, the elementary parallel-epipedon in the structure of dehydrated 12-phosphoric-tungstic acid has only half the volume of the elementary cell in the structure WO_3 . There are 9 figures, 1 table, and 5 references, 2 of which are Soviet.

SUBMITTED: July 25, 1957

Card 2/2

BABAD-ZAKHRYAPIN, A.A.

~~BABAD-ZAKHRYAPIN, A.A.~~ ^K TROITSKY, O. V.

"Some Problems of Iso- and Heteropoly-Compounds Crystal
Chemistry"

a report presented at Symposium of the International Union of
Crystallography Leningrad, 21-27 May 1979

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18.7500 1413

S/170/61/004/003/012/013
B108/B209

AUTHORS: Izvekov, V. I., Gorbunov, N. S., and Babad-Zakhryapin, A. A.

TITLE: The diffusion of iron into titanium dioxide

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 4, no. 3, 1961, 119-122

TEXT: In the present paper the authors give an experimental report on the diffusion of iron into titanium dioxide. Titanium dioxide powder was pressed to tablets under 150 atm and sintered in a quartz tube (air atmosphere) for 50 hr at 1100°C. Sample temperature was measured by means of a platinum-platinic thermojunction, the furnace temperature was controlled by a 3PM-47 (ERM-47)-type three-way thermostat. After polishing the surface flat, the samples were homogenized for 25 hr. Density was between 3.27 and 3.43 g/cm³. The phase composition of the samples was determined radiographically. In a vacuum of 10⁻⁵ mm Hg, the samples were coated with an Fe⁵⁹ tracer which was evaporated from a tungsten heater. During 1-2 minutes of annealing between 950°C and 1050°C in an air atmosphere in quartz tubes placed in a furnace the radioactive layer (some tenths of a micron thick) became com-

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B108/B209

The diffusion of...

pletely oxidized. The temperature of the furnace was kept constant to an accuracy of $\pm 0.5^\circ\text{C}$. The diffusion coefficients were determined by successively taking down layers and determining the activity of the sample every time after one layer was removed. The thickness of the layers was found with an accuracy of 2μ . Fik's relation (1) which connects concentration C of diffused substance at a depth x , initial concentration C_0 , diffusion coefficient D , and time t permits calculating D from the experimental curve activity versus sample thickness. Taking C proportional to the activity N , the authors calculated D from the graphs $\log N$ versus x^2 by means of the formula $D = 0.1086/t \tan \alpha$, where α denotes the angle of inclination of the straight lines in the graphs $\log N = f(x^2)$. The results obtained for the 11 samples investigated are given in Table 2. From a $\log D$ versus $1/T$ curve (A), the relation $D = 2.04 \cdot 10^{-2} \exp (-33.4/RT)$ for Fe diffusion into TiO_2 was obtained. The obtained data point to diffusion of iron into TiO_2 and along its grain boundary. The value of the activation energy ($Q = 33.4$ kcal/g. mole) as determined by the authors of the present paper from (A) is slightly lower than that of other publications ($Q = 34$ and 34.7 kcal/g. mole) which is probably due to the conditions of sample preparation.

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The diffusion of ...

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tion. Microscopical investigation pointed to a loose structure of the samples employed here. There are 3 figures, 2 tables, and 6 references: 3 Soviet-bloc.

ASSOCIATION: Institut fizicheskoy khimii, g. Moskva (Institute of Physical Chemistry, Moscow)

SUBMITTED: June 27, 1960

Card 3/5

GORBUNOV, N.S.; SHISHAKOV, N.A.; SADIKOV, G.G.; BABAD-ZAKHRYAFIN, A.A.

Neutron-diffraction study of titanium carbide and nitride. Izv.AN
SSSR.Otd.khim.nauk no.11:2093-2095 N '61. (MIRA 14:11)

1. Institut fizicheskoy Khimii AN SSSR.
(Titanium carbide) (Titanium nitride)

BABAD-ZAKHRYAPIN, A.A.; GORBUNOV, N.S.; IZBEKOV, V.I.

Calculation of X-ray patterns of flat specimens. Zav.lab. 27
no.9:1116 '61. (MIRA 14:9)

1. Institut fizicheskoy khimii AN SSSR.
(Radiography)

S/126/62/014/002/005/018
E071/E435

AUTHORS: Izvekov, V.I., Gorbunov, N.S., Babad-Zakhryapin, A.A.

TITLE: Diffusion of iron in hematite

PERIODICAL: Fizika metallov i metallovedeniye, v.14, no.2, 1962, 195-198

TEXT: The diffusion of Fe^{59} in hematite was investigated using cylindrical specimens (10 mm diameter, 5 mm in height) made by pressing (4000 to 5000 kg/cm²) and sintering (1100 to 1200°C for 50 hours) a fine hematite powder. A layer of radioactive iron was deposited either by evaporation and condensation of the radioactive vapour in a vacuo or by electrodeposition. Annealing and diffusion heating of the specimens was done in hermetically sealed ampules so that experiments could be carried out in any desired atmosphere or in vacuo (actually the experiments were done in air). The accuracy of the temperature control varied from ± 0.5 to $\pm 5^\circ C$. The coefficients of diffusion were determined by the removal of successive layers. The temperature dependence of the diffusion coefficient of iron in hematite for the temperature range 950 to 1050°C was found as $d = 1.3 \times 10^6 \exp$
Card 1/2

Diffusion of iron in hematite

S/126/62/014/002/005/018
EO71/E435

(-100200/RT). The results obtained are in reasonably good agreement with literature data. There are 4 figures and 2 tables.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR
(Institute of Physical Chemistry AS USSR)

SUBMITTED: August 1, 1961 (initially)
October 31, 1962 (after revision)

Card 2/2

BABAD-ZAKHRYAPIN, A.A.; BEREZKINA, Yu.F.

X-ray diffraction study of saturated aqueous solutions of tungstates. Zhur.ob.khim. 32 no.11:3474-3476 N '62.
(MIRA 15:11)

1. Institut fizicheskoy khimii AN SSSR.
(Tungstates)
(X rays--Diffraction)

S/053/62/077/004/006/006
B102/B104

AUTHORS: Babad-Zakhryapin, A. A., Gorbunov, N. S., Izvekov, V. I.

TITLE: Experimental methods for slow electron diffraction studies

PERIODICAL: Uspekhi fizicheskikh nauk, v. 77, no. 4, 1962, 727 - 748

TEXT: The principle underlying slow electron diffraction studies and their present state of development are surveyed as was done for Russian works in 1949. Modern experimental technique (up to 1961) and the problems it raises are discussed, disregarding elementary matters such as, e. g., the working of a diffraction chamber. The survey has the following sections: Introduction. I. Experimental methods for observing slow electron diffraction. a) use of diffraction chamber; b) gas injection systems; c) the vacuum system; d) the crystal holder; e) methods for recording the diffraction picture; f) diffraction chamber with photographic recording of the diffraction picture. II. Peculiarities of the slow electron diffraction method. a) Peculiarities of the diffraction effects; b) purification of the surfaces to be investigated; c) structure of the residual gas layers on metallic surfaces; d) dependence of the type of

Card 1/2

Experimental methods for slow electron... S/053/62/077/004/006/006
B102/B104

diffraction picture on conditions and geometry of exposure. III. Some applications of the method. a) Determining the internal potential of a crystal lattice, b) gas adsorption. Concluding remarks. There are 19 figures, 2 tables, and 42 references. ✓

Card 2/2

БАБАД-ЗАХИРЯПИН, А.А.; ГОРБУНОВ, Н.С.; ИЗВЕКОВ, В.И.

Estimation of the error in the values of interatomic distances obtained
by the radial distribution method. Izv.AN SSSR.Otd.khim.nauk no.9:
1673-1674 S '62. (MIRA 15:10)

1. Institut fizicheskoy khimii AN SSSR.

(X rays--Diffraction)

(Chemical structure)

BABAD-ZAKHRYAPIN, A.A.; GORBUNOV, N.S.

Structure of 12-silicontungstate and 12-phosphomolybdate anions in saturated aqueous solutions. Izv. AN SSSR.Otd.khim.nauk no.10: 1870-1871 0 '62. (MIRA 15:10)

1. Institut fizicheskoy khimii AN SSSR.
(Silicontungstic acid) (Phosphomolybdic acid)

BABAD-ZAKHRYAPIN, A. A.; GORBUNOV, N. S.

Structure of the calcination products of some 12-heteropoly-
acids. Izv. AN SSSR, Otd. khim. nauk no.1:14-16 '63,
(MIRA 16:1)

1. Institut fizicheskoy khimii AN SSSR.

(Phosphotungstic acids)

BABAD-ZAKHRYAPIN, A.A.

X-ray examination of the process of dehydration of 12-silicotungstic
and 12-phosphomolybdic acids. Izv. AN SSSR. Otd. khim. nauk -
no. 2: 215-220 F '63. (MIRA 16:4)

1. Institut fizicheskoy khimii AN SSSR.
(Silicotungstic acids) (Phosphomolybdic acids) (Dehydration(Chemistry))

BABAD-ZAKHRYAPIN, A.A.; BEREZKINA, Yu.F.

Mechanism underlying complex formation in solutions of tungstates
and molybdates. Zhur.strukt.khim. 4 no.3:346-349 Mye '63.
(MIRA 16:6)

1. Institut fizicheskoy khimii AN SSSR.
(Complex compounds) (Tungstates) (Molybdates)

BABAD-ZAHREAI IN, A.A. [Babad-Zakhryapin, A.A.]; GORBUNOV, N.S.;
IZVEKOV, V.I.

Experimental methods of the study of slow electron diffraction.
Analele mat 17 no. 3:117-141 J1-S '63.

BABAD-ZAKHRYAPIN, A.A.

Structure of the calcination products of some salts of 12-phosphotungstic acid. Zhur.strukt.khim. 4 no.5:724-727 S-0 '63. (MIRA 16:11)

1. Institut fizicheskoy khimii AN SSSR.

GERT, I.M.; BABAD-ZAKHNYAPIN, A.A.

Certain characteristics of diffusion processes in the formation
of coatings by the condensation method. Fiz. met. i metalloved.
17 no.4:401-604 Ap '64. (MIRA 17:8)

PARAD-ZAKHRYANTIN, A.A.; DOLGOYEV, V.I.

Thermographic investigation of the process of dehydration and decomposition of some 12-heteropoly acids. Izv. AN SSSR, Ser. khim. na. 5:799-804 My '64. (USSR 1965)

1. Institut fizicheskoy khimii AN SSSR.

L 18366-65 EWT(m)/EWP(t)/EWP(b) AEDC(a)/SSD/ATWL/ESD(t) JD
ACCESSION NR: AP4044148 S/0126/64/018/002/0210/0214

AUTHOR: Gert, L. M.; Babad-Zakhryapin, A. A.

TITLE: Characteristics of the mechanism of the formation of diffusion coating by method of evaporation

SOURCE: Fizika metallov i metallovedeniye, v. 18, no. 2, 1964, 210-214

TOPIC TAGS: evaporation coating, diffusion 4

ABSTRACT: The relationship between the process of evaporation and that of diffusion was found to shape the curve of the growth of the coating during evaporation coating. The method of evaporation coating is characterized by temperature conditions which are identical for the surface being coated and the metal used for that purpose. Curves plotted according to the formation of the coating approximate a linear relationship in short holding periods while the curve of longer processes comes close to a parabola. When the diffusion coefficient of the sublayer metal in the coating, the shape of the formation curve changes in the initial

Card 1/12

L 18366-65
ACCESSION NR: AP4044148

section in comparison with the general character of the diagram. Orig. art. has:
5 figures

ASSOCIATION: None

SUBMITTED: 16Sep63

ENCL: 02

SUB CODE: MM

NO REF SOV: 003

OTHER: 002

Cord 2/4

GEN1, L.N.; BABAD-ZAKHRYAPIN, A.A.

Certain characteristics of diffusion processes in multiphase coatings formed by the condensation method. Fiz. met. i metalloved. 19 no.3:406-410 Mr '65.
(MIRA 18:4)

L 15000-66 EWT(m)/T/EWP(t)/EWP(b) JD

ACC NR: AP5028560 (N)

SOURCE CODE: UR/0126/65/020/005/0708/0711

AUTHOR: Babad-Zakhryapin, A. A.; Gert, L. M.

ORG: none

TITLE: Characteristics of phase formation in coatings produced by condensation on hot substrates

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 5, 1965, 708-711

TOPIC TAGS: phase equilibrium, phase composition, phase diagram, annealing, metal physics, condensation reaction

ABSTRACT: Possible causes underlying retarded growth of phases in multiphase systems are studied. Theoretical data indicated a much faster phase growth on hot substrates than by diffusion in semiinfinite media. Experimental evidence reported in the literature was used to substantiate the theoretical outline. The absence of a particular phase is attributed to low diffusion time or the characteristics of the diffusive processes in multiphase systems. An equation was given for two phase diffusion in a semiinfinite medium:

Card 1/3

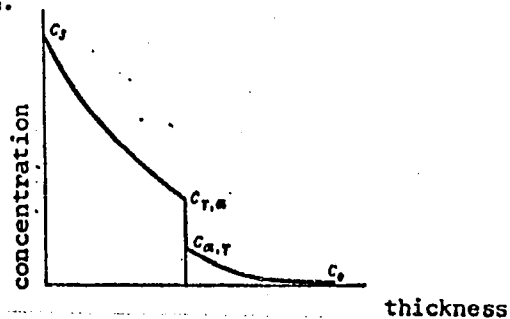
DOC: 539.12.172

L 15000-66
ACC NR: AP5028560

$$c_{\gamma\alpha} - c_{\alpha\gamma} = \frac{c_s - c_{\gamma\alpha}}{\sqrt{\pi b} e^{b^2} \psi(b)} - \frac{c_{\alpha\gamma} - c_0}{\sqrt{\pi b} \sqrt{\frac{D_\gamma}{D_\alpha}} e^{b^2} \psi(b \sqrt{\frac{D_\gamma}{D_\alpha}})}$$

where $b = \frac{\xi}{2\sqrt{D_\gamma t}}$; $\psi(b) = \frac{2}{\sqrt{\pi}} \int_0^b e^{-t^2} dt$;

ξ is thickness of the γ -phase layer; D_γ is the diffusion coefficient in the γ -phase; D_α is the diffusion coefficient in the α -phase; $\phi = D_\gamma/D_\alpha$. The concentration penetration curve for this case is shown.



Card 2/3

L 15000-66

ACC NR: AP5028560

A similar curve was postulated for diffusion in multiphase systems. For bounded media, however, alterations in the equation were necessary. In these cases the concentration depends on the growth laws for the coating. Typical growth curves are given. Thicknesses of the phases formed according to linear and parabolic laws are compared. Also for coatings grown according to the linear law, the pattern of the distributed phase is elongated. The growth of the coatings (linear law) creates conditions with a narrow region of homogeneity for the rapid incubation of the phase. Predetermined compositions for the phase layers could be attained by selecting the appropriate growth law or combination of linear laws. This could prove useful in the construction of temperature profiles for constitution diagrams. Orig. art. has: 3 figures, 1 equation.

SUB CODE: 11,20/ SUBM DATE: 25Nov64/ ORIG REF: 002/ GTH REF: 003

Card 3/3

BABADZHAN, A.

Preface. Trudy Inst.khim.i met. no.3:3 '55.
(Nonferrous metals--Metallurgy)

(MLRA 9:2)

BABADZHAN, A.A., kand. tekhn.nauk; BOGOMOLOV, V.I., inzh., retsenzent;
BULATOV, V.D., inzh., retsenzent; VETRENKO, Ye.A., kand.
tekhn. nauk, red.; VETRENKO, Ye.A., kand. tekhn. nauk, red.;
LUCHKO, Yu.V., red.izd-va; KOVALENKO, N.I., tekhn. red.

[Innovators' practice in the copper smelting industry of the
Urals] Opyt novatorov medeplavil'noi promyshlennosti Urala.
Pod red. E.A.Vetrenko. Sverdlovsk, Metallurgizdat, 1953.
133 p. (MIRA 16:8)
(Ural Mountain region--Copper industry)

BAVADZHAN, A. A.

Opyt novatorov medeplavil'noi promyshlennosti Urala [Experience of innovators of the copper smelting industry]. Moskva, Metallurgizdat, 1953. 131 p.

SO: Monthly List of Russian Accessions, Vol 7 No. 1 April 1954.

BABADZHAN, A.A.

~~Treatment of zinc~~ containing copper concentrates in converters.

TSvet. met. 29 no.8:45-50 Ag '56.

(MLRA 9:10)

1. Unipromed'.

(Ural Mountain region--Ore dressing) (Copper--Metallurgy)

LYAPUSTINA, Ye.M.; BABADZHAN, A.A.; BULATOV, V.D.

Producing and processing granulated concentrates at the Kirovgrad copper
smelting plant. TSvet.met. 29 no.9:24-28 S '56. (MLRA 9:10)
(Kirovgrad--Copper--Metallurgy) (Ore dressing)

SOV/137-58-7-14490

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7. p 80 (USSR)

AUTHORS: Babadzhan, A.A., Bulatov, V.D., Vetrenko, Ye.A.

TITLE: Volatilization of Elements and Compounds With a Low Boiling Point During a Pyroselection Process (Ob uletuchivanii legkokipyashchikh elementov i soyedineniy v protsesse pirosselekttsii)

PERIODICAL: Byul. tsvetn. metallurgii, 1957, Nr 24, pp 19-20

ABSTRACT: A study of the composition of sublimates obtained by processing metallurgical dusts by pyroselective methods has revealed the following facts: 1. Cu, Fe, Si, and Al pass into the sublimates as a result of mechanical carry-off of the dust being processed and matte which is being blown with air. 2. In and Ge sublimate most intensively during the first hours of the operation. The content of these elements in the sublimates diminishes as the process of blowing progresses. When processing sulfide concentrates with increased In content, 95% of this element may be removed from the melt and utilized to increase the In content in the sublimates by as much as 10-15 times.

Card 1/2 • 3. Most intensive fugacity of Pb, Cd, Tl, and As is observed

SOV/137-58-7-14490

Volatilization of Elements and Compounds (cont.)

at the halfway point of the operation (at a high temperature of fusion).
4. Since in the early stages of blowing Zn volatilizes less rapidly than other metals, its concentration in the sublimates increases as the operation progresses.

1. Metals--Sublimation 2. Intermetallic compounds--Sublimation

G.S.

Card 2/2

BABADZHAN, A. A.

Resp. ed. of Book, Collection of Studies in the Metallurgy of Heavy Non-ferrous Metals, Sverdlovsk, 1957, 168pp. Trudy, Inst. metallurgii, Ural'skiy filial, Sverdlovsk, Acad. Sci. USSR.

- p.44- Babadzhan, A. A. "Determination of the Speed of Oxidation of MoS_2 as a function of Temperature.
- p. 47 Babadzhan, A. A. "Sublimation Roasting of Combined Copper-Molybdenum Concentrate."
- p. 74 "The Dependence of the Vapor Pressure of MoO_3 on Temperature,"

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 54 (USSR) SOV/137-58-12-24308

AUTHOR: Babadzhan, A. A.

TITLE: Determination of the Nominal Oxidation Rate of MoS_2 as a Function of the Temperature (Opredeleniye uslovnoy skorosti okisleniya MoS_2 v zavisimosti ot temperatury)

PERIODICAL: Tr. In-ta metallurgii. Ural'skiy fil. AN SSSR, 1957, Nr 1, pp 44-46

ABSTRACT: The nominal oxidation rate, v , of MoS_2 is defined by the amount of SO_2 liberated in roasting. The experiments are run in the 130-550°C temperature interval. It is established that the v of MoS_2 does not exceed 7.55 mg SO_2 per min (494° temperature). The v of MoS_2 is similar to that of FeS and is considerably higher than that of CuS , ZnS , and PbS .

N. P.

Card 1/1

Translation from: Referativnyy zhurnal. Metallurgiya 1959, Nr 2, p 79 (USSR)

AUTHOR: Babadzhan, A. A.

TITLE: Sublimation Roasting of a Copper-molibdenum Bulk Concentrate (Sublimatsionnyy obzhig kollektivnogo mednomolibdenovogo konsentрата)

PERIODICAL: Tr. Inst. metallurgii, Ural'skie in. AN SSSR 1957, Nr 1, pp 47-51

ABSTRACT: Experiments were carried out for a study of the technique for separation of Mo from a Cu-Mo concentrate by roasting with sublimation of MoO_3 . At 900°C the volatility of Mo proved to be 22-40%. Owing to the caking of the concentrate during roasting and the unsatisfactory extraction the sublimation roasting cannot be recommended. A new combined method is recommended which consists of a preliminary oxidizing roasting at $600-700^\circ$, leaching out of MoO_3 with NaOH or Na_2CO_3 with subsequent treatment of the Cu-containing sediment with H_2SO_4 and the electrolysis or fusing of the sediment for the preparation of crude Cu.

Card 1/1

L. B.

SOV/137-58-12-24042

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 18 (USSR)

AUTHOR: Babadzhan, A. A.

TITLE: Temperature Dependence of MoO_3 Vapor Pressure (Zavisimost' uprugosti para MoO_3 ot temperatury)

PERIODICAL: Tr. In-ta metallurgii. Ural'skiy fil. AN SSSR, 1957, Nr 1, pp 74-79

ABSTRACT: The vapor pressure of MoO_3 , p_{MoO_3} , is determined by saturating a gas stream with MoO_3 vapors. For the conditions of experiment it is established that at N_2 flows of < 0.5 liters/min, p_{MoO_3} is not dependent upon the N_2 flow rate. The investigation is conducted at temperatures of $550-850^\circ$ approximately. Following are the results obtained for solid and liquid MoO_3 : $\log_{10} p_{\text{MoO}_3 \text{ solid}} = (-19045/T) + 19.172$; $\log_{10} p_{\text{MoO}_3 \text{ liquid}} = (-12680/T) + 13.228$. The heat and temperatures of fusion of MoO_3 , which are 2909 cal/g-mole and 797°C , respectively, are calculated from the p_{MoO_3} data for the solid and liquid states.

Card 1/1

I. K.

SOV/137-58-11-22222

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 55 (USSR)

AUTHORS: Babadzhan, A. A., Aglitskiy, V. A.

TITLE: A Combination Flowsheet for Complex Processing of Lean Copper- and-Molybdenum Ores (Kombinirovannaya skhema kompleksnoy pererabotki bednykh medno-molibdenovykh rud)

PERIODICAL: Tr. i materialy. Ural'skiy nauch. i proyekt. inst. medn. prom-sti, 1957, Nr 2, pp 280-291

ABSTRACT: Analysis of various process procedures results in recommendation of a method combining oxidizing roasting of Cu-Mo concentrate with hydrometallurgical treatment of the cinders. Roasting is at 550-670°C. Leaching of the cinders is by NaOH solutions. The Mo is extracted from Na_2MoO_4 as CaMoO_4 by addition of Ca(OH)_2 or CaCl_2 . The residue, containing Cu, is reprocessed to obtain blister or electrolytic Cu.

T. S.

Card 1/1

137-58-6-11964

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 6, p 111 (USSR)

AUTHORS: Aglitskiy, V.A., ~~Labadzhan, A.A.~~

TITLE: Relationship of Blister Copper Quality to Degree to Which Blow is Carried (Kachestvo chernovoy medi v zavisimosti ot stepeni yeye produvki)

PERIODICAL: Tr. i materialy. Ural'skiy n.-i. i proyekt. in-t medn. prom-sti, 1957, Nr 2, pp 292-306

ABSTRACT: An experimental study was conducted to determine the effect of the degree of Cu blow on its quality under the conditions obtaining at the Kirovograd and Krasnoural'sk copper smelters. The Cu contents of the blister Cu rises with continuing blow, attaining a maximum at 0.25-0.30% O. Further increase in O contents results in some reduction in Cu contents. As the O contents of the blister copper rise to 0.40%, there is a sharp reduction in S contents. There is virtually no change in the Ni, Zn, Bi, Pb, Sb, and Fe contents as O concentration rises to 0.7%. To obtain a satisfactory ingot surface it is necessary to continue to blow the Cu until it contains $\geq 0.4\%$ O. 1. Copper ores--Processing G.S.
2. Copper--Production 3. Copper--Quality control 4. Oxygen--Effectiveness

Card 1/1

BABADZHAN, A.A.

Studying the possibility of selective dust collection in converter
processing of complex ore concentrates. Trudy Unipromedi no.2:
343-354 '57. (MIRA 11:11)

(Ore dressing) (Fly ash)

BABADZHAN, A.A.; RITTER, L.G.; UDINTSEVA, V.S.

Using gases from pyrometallurgical processes for the production
of sulfuric acid. Trudy Unipromedi no.2:381-387 '57.

(Copper-Metallurgy)

(Sulfuric acid)

(MIRA 11:11)

Babadzhan, A. A.

137-1958-2-2620

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 59 (USSR)

AUTHORS: Babadzhan, A. A., Shreyber, K. Ya., Galimov, M. D.

TITLE: Using Mazut as a Reducing Agent in the "Pyroselection" Process
(Ispol'zovaniye mazuta v kachestve vosstanovitelya v protsesse
piroselektzii)

PERIODICAL: Byul. tsvetn. metallurgii, 1957, Nr 13, pp 27-28

ABSTRACT: A pyrometallurgical selection method for the treatment of
Cu-Zn and Cu-Pb sulfide concentrates and other complex multi-
metal substances in concentrates has been worked out and intro-
duced into industry.

G. S.

1. Copper alloys--Pyroselection 2. Mazut--Reducing agent--Appli-
cations

Card 1/1

RECEIVED, 11

136-1-6/20

AUTHORS: Babadshan, A.A., Aglitskiy, V.A., Drobchenko, A.T.,
Garenskikh, A.D., Bulatov, V.D., Kondrashov, D.P.,
Medvedev, V.K. and Milyayev, V.L.

TITLE: Treatment of Polymetallic Sulphide Concentrates in a
Converter by Pyrometallurgical Selection (Pererabotka
polimetallicheskih sul'fidnykh kontsentratsiy v
konvertere metodom pirometallurgicheskoy selektsii)

PERIODICAL: Tsvetnyye Metally, 1958, No.1, pp. 24 - 30 (USSR).
Vol. 31

ABSTRACT: The method described for the treatment of copper-zinc
and copper-lead beneficiation products depends on the blowing
of these in a converter with a carbon-air mixture after
preliminary oxidation. The method was adopted at the Kirov-
grad Works after tests in which the following participated:
L.N. Leonov, K.L. Demyak, L.M. Kabanov, Sh.G. Bolgozhin,
P.I. Dochello, G.I. Chernykh, F.P. Kulenko, N.P. Savchenko,
K.Ya. Shreyber and M.D. Galimov at the Kirovgrad Works and
P.S. Vlasov, M.S. Khamylov, I.S. Reunov and others at the
Karabashskiy Copper Smelting Works (Karabashskiy medenlav-
il'nyy zavod). After briefly mentioning preliminary experi-
ments in 16- and 40-ton converters, the article goes on to
describe the characteristics of the materials used. These
consisted of a wide variety of polymetallic materials with a

Card 1/3

136-1-6/20

Treatment of Polymetallic Sulphide Concentrates in a Converter by
Pyrometallurgical Selection

copper and zinc content of 5 - 25% and a sulphur content of over 30%. Difficulties with coal injection were encountered in tests and care had to be exercised in balancing concentrate feed rate with the blowing rate. During the first (melting) stage, the gas is rich in sulphur trioxide, which is neutralised in the second (oxidation) stage by the zinc dust evolved; for the third (reducing) stage, a bath temperature of 1 350 - 1 450 °C is recommended. The article discusses the characteristics of the stages and shows contents of sulphur and zinc against time (Figs. 1, 2 and 3). From a joint study of the full-scale process by the Unipromed' Institute and the Kirovgrad Works, the following were among the main conclusions drawn: the method is practicable for the treatment of copper-zinc and copper-lead-zinc sulphide concentrates to give a dust containing zinc, lead and rare metals; the ratio of previously charged liquid matte to concentrate is 1:2.5-3.0; coal consumption in the reducing period does not exceed 20% of the concentrate weight; melt temperatures should be 1 150 - 1 250 °C in Stage I, 1 200 - 1 400 in II and 1 350 - 1 450 °C in III; complete oxidation is neither practicable nor desirable; the

Card2/5

136-1-6/20

Treatment of Polymetallic Sulphide Concentrates in a Converter by
Pyrometallurgical Selection

air/coal ratio should be such as to give 40% CO₂ and 60% CO in the gas phase; copper contents in the ferruginous slag are 1.5-3%, hence the slag is treated further; 80% of the zinc is trapped in the dust; 80% of the copper is in the crude copper (98.0-98.5% Cu, 0.07% Ni, 0.004-0.02% Sb, 0.002-0.004% Bi; crude dust yield is 11% of the concentrate weight. The present form of the plant layout is shown (Fig.4) and the economic advantages of the process for Kirovgrad-region ores are said to have been confirmed by calculations by the Giprotsvetmet and Unipromed organisations. There are 4 figures and 7 references, of which 6 are Russian and 1 English.

ASSOCIATIONS: Unipromed' and Kirovgrad Coppr Smelting Works
(Kirovgradskiy medeplavil'nyy zavod)

AVAILABLE: Library of Congress
Card 3/3

ABSTRACT

AUTHORS: Babadzhan, A.A., Aglitskiy, V.A., Shreyber, K Ya., Galimov, M.D. 136-58-3-7/21
and Shirinkin, N.A.

TITLE: System for feeding coal dust into a converter used for pyroselection
(Sistema podachi ugol'noy pyli v konverter dlya protsessa pirolektsiya)

PERIODICAL: Tsvetnyye Metally, 1958, Nr. 3., pp. 38 - 46 (USSR)

ABSTRACT: The authors describe preliminary investigations at the Kirovgradskiy copper-smelting works before the adoption of its pyroselection method which involves the injection into the converter of coal dust at a fixed rate in relation to the air flow (pressure 0.7 - 1.0 atm gauge). The initial system involved pressurization of the bunker, but later an atmospheric pressure design, as tested at the Krasnoural'sk copper-smelting works was adopted and incorporated in the full-scale installation commissioned in August 1955. The installation (fig.1.) consists of the following parts, each of which is described and discussed. The pneumatic screw pump has an adjustable speed of revolution and a pump (fig.2.), the latter being based on one made by the Pavshinskiy mechanical works; a KSE-6 compressor supplies compressed air. The air/dust mixture (5-10 kg coal dust per kg air) moves to the converter at 12-15 m/sec. A critical part of the installation is the air and gas distribution system near and in the converter: here a blind-pass collector (fig.4) proposed by N.A. Shirinkin, M.D. Galimov and A.A. Babadzhan, and designed with the

Card 1/2

System for feeding coal dust into a converter used for pyroselection. 136-58-3-7/21

participation of M.D. Galimov, Ye.A. Verkhoturova and B.P. Smorodiyakov was found to give even feed to all the tuyeres. An ejector type of tuyere with individual air and air/coal feeds, proposed and designed by M.D. Galimov, A.A. Babadzhan, B.P. Smorodiyakov, S.Ya. Musikhin and A.A. Verkholetoy was chosen (fig.7). To avoid air losses during tuyere clearing a ring seal designed by S.M. Popov, Engineer, is used. The authors recommend the system described for other processes requiring the injection of coal dusts into a fused mass. There are 7 figures.

AVAILABLE: Library of Congress.

1. Coal dust-Applications
2. Fuels-Control systems

Card 2/2

SOV/136-59-4-3/24

AUTHORS: Drobchenko, A.T., Bulatov, V.D., Babadzhan, A.A., and Kabanov, L.M.

TITLE: Treating the Dzhezkazgan Copper-Lead Ores by Differential Flotation Followed by a Pyro-Selective Converter Treatment (Pererabotka medno-svintsovoy rudy Dzhezkazganskogo mestorozhdeniya po skheme kollektivnoy flotatsii s posleduyushchey piroselektsiyey v konvertere)

PERIODICAL: Tsvetnyye metally, 1959, Nr 4, pp 10-15 (USSR)

ABSTRACT: There is a considerable quantity of ore used on the Kirovgradsky copper smelter which is obtained from Dzhezkazgan and contains 4-5% Cu and 0.8-1.5 Pb. Selective flotation was at first used in the scheme (Fig 1) for extracting the metals but this was found to be unsatisfactory as the ratio of the metals was unsuitable, the metal content varied within wide limits and the quantity of reagents used was very costly. The cost-price of lead produced by this method was high and the yield very variable (table 1). Work carried out at the Unipromed Institute on copper-zinc production by pyroselective means had shown that lead was recovered at a greater rate even

Card 1/2

SOV/136-59-4-3/24

Treating the Dzhezkazgan Copper-Lead Ores by Differential Flotation
Followed by a Pyro-Selective Converter Treatment

than zinc. An experiment was therefore carried out and was successful leading to the production scheme in Fig 2; differential flotation of sulphides followed by pyroselective treatment. The concentrate from the flotation contained 30 to 33% Cu and 9.25 to 10.72% Pb. This was passed to the converter where coke was used as a reducing agent. The results of this method are given in table 4 and the relative cost compared with selective flotation in table 6. This shows its advantages over selective flotation which are: higher amount of lead extracted; copper content in dust from pyroselection much less; extraction of zinc and rare metals as well as lead; copper extraction higher by 3 to 4%; no poisonous cyanide materials used and running costs significantly lower. There are 2 figures, 6 tables and 4 Soviet references.

Card 2/2

SOV/136-59-4-7/24

AUTHORS: Babačzhan, A.A., Bulatov, V.D., Vetrenko, Ye.A.,
Komlev, G.A. and Medvedev, V.K.

TITLE: Ways of Improving the Technology and Requirements of the
Process of Pyroselection (Puti sovershenstvovaniya
tekhnologii i trebovaniya k agregatu dlya protsessy
piroselektzii)

PERIODICAL: Tsvetnyye metally, 1959, Nr 4, pp 30-33 (USSR)

ABSTRACT: The paper reviews a lot of work carried out in the field
of pyroselection, a method of extracting easily vaporised
substances. Work has been carried out on the Kivogradskiy
and Irtyshskiy copper smelters and also in the Kamenogorskiy
lead works on the preparation of Cu- Pb- and Bi-containing
matte in a converter. According to the Altayskiy gorno-
metallurgicheskiy institute, sublimation of Pb reaches
70% and recent kinetic investigations (Ref 15,16) have
shown the high values of sublimation of Zn and Cd.
Pyroselection can result in an increase in the rate of
using raw material of 10 to 12% (Ref 9). It has been
shown that preliminary granulation of the charge is
advisable (Ref 10). The melting time was 30 to 40% of
the total cycle, some heat being used in drying the charge

Card 1/3

SOV/136-59-4-7/24

Ways of Improving the Technology and Requirements of the Process of Pyroselection

and in the dissociation of sulphur. By preliminarily heating the charge, production can be increased. This can be done by heating with carbon-type fuel. The next stage for Zn-containing matte is an oxidising blow which quickly extracts the Zn. The ZnS is extracted by blowing with a neutral or a reducing atmosphere, the temperature being obtained by carbon fuel. After extracting most of the ZnS, the remaining ZnS is removed by oxidising to the oxide. Afterwards it is reduced to metallic Zn. From the practical point of view, lump coke as a fuel gives quite good results. The slag largely consists of iron oxide. CaO can be used as a flux, as it has a positive influence on the extraction of volatile elements. The furnace for pyroselection must be sealed and have an automatic continuous charger. There must be some means for preheating the charge. Production can be increased by decreasing heat losses.

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Pyroselection

The most frequent cause of trouble is a gas leak
between the lining and the case. There are
26 references, 24 of which are Soviet and 2 English.

Card 3/3

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Investigation and development of a lining for a shaft sunk
under particularly difficult hydrogeological conditions.
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24(7)

AUTHORS: Babadzhan, Ye. I., Rozenshtaukh, L. D. SOV/32-25-2-56/78

TITLE: The Application of the "Stylometer" ST-7 for the Immediate Spectrum Analysis of Steels and Slags (Primeneniye stilometra ST-7 dlya spektral'nogo ekspress-analiza staley i shlakov)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 2, pp 233-234 (USSR)

ABSTRACT: Since Granovskiy's method (Ref 2) for the immediate spectrum analysis of basic open-hearth slags did not work satisfactorily, the method developed by Veselovskaya (Ref 2) was used, in which the "stylometer" ST-7 with the generator IG-2 is employed. Considering the properties of the generator IG-2 and the slag composition the following analysis conditions were established: $C = 0.01 \mu F$, $L = 0.01 \text{ mH}$, $i = 2.5 \text{ A}$, $V = 250 \text{ V}$. The standard samples were manufactured from industrial samples; calibration diagrams were developed from the mean values found in 50 measurements (Fig 1). The analysis is carried out in the following order: basicity $\frac{\text{CaO}}{\text{SiO}_2}$ (1-4), CaO (20-40%), and MnO (6-20%). The SiO_2 content is determined from the basicity

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The Application of the "Stylometer" ST-7 for the
Immediate Spectrum Analysis of Steels and Slags

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and the CaO content; FeO is determined by chemical analysis. If more than 20% FeO are present, it is not recommended to carry out a spectrum analysis. Likewise, the tungsten content of steel 5 KhNV was determined. It was possible to determine a minor tungsten content with the help of the "stylometer" ST-7 on the basis of styloscopic data. In this examination the generator PS-39 was used as exciter of the spectrum, and some modifications had to be made. Higher tungsten contents (0.5-1.1%) were analyzed photometrically on the "stylometer" ST-7. The calibration curve (Fig 3) was plotted on the basis of data obtained from the standard samples of a V-set of the Laboratoriya standartnykh obraztsov Ural'skogo instituta metallov (Laboratory for Standard Samples of the Ural Metals Institute). There are 3 figures, 1 table, and 2 Soviet references.

Card 2/2

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T-4

Abs Jour: Ref Zhur-Biol., No 12, 1958, 55489.

Author : Babadzhanov, F.N.

Inst

Title : The Problem of Iron Isotop Distribution Throughout
the Various Organs in Standard and in Experimental Anemia.

Orig Pub: Med. zh. Uzbekistana, 1957, No 3, 62-64.

Abstract: Anemized dogs (D) were intravenously inoculated with $\text{Fe}^{59}\text{Cl}_3$. Subsequently, at various time periods, the dogs were killed by complete exsanguination. Then, the radioactivity was determined in a 100 mg tissue sample of the liver, bone marrow, spleen, cardiac muscle, kidneys, large and small intestines, as well as in a 0.2 ml plasma sample, and also of erythrocytes (E). After 3 hours, the largest amount of

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Abs Jour: Ref Zhur-Biol., No 12, 1958, 55489.

radioactivity was found in the liver, in the kidneys, and in the large intestine, while the smallest amount of activity was found in the spleen, in the skeletal muscles, and in the small intestine. The cardiac muscle contained more Fe than the skeletal muscle. After 3 days, the radioactivities of the liver and of the spleen rose sharply, and then subsided. The accumulation of Fe⁵⁹ in the bone marrow, in the cardiac and skeletal muscles, and in the large and small intestines developed gradually, and still continued to develop on the 10th day. In 2 dogs with standard and with experimental post-hemorrhagic anemia, the Fe erythrocyte activity was higher at all times than the activity of the plasma, and reached its maximum after 36 days. The E activity was higher in exsanguinated

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Abs Jour: Ref Zhur-Biol., No 12, 1958, 55489.

dogs than in normal dogs, and its decrease proceeded with greater speed. When tests were made on two other dogs, it was found that in exsanguination the Hb content decreased to 35 percent in one of the dogs, while in the other dog a twofold administration of a 2 percent phenylhydrazine solution (0.5 mg/kg) for 6 days decreased the Hb content to 30 percent. At the same time, both dogs received a Fe^{59} injection. In dogs with a phenylhydrazine anemia the E activity reached its maximum earlier (on the 4th day) than in dogs with posthemorrhagic anemia. However, the E activity in dogs with a phenylhydrazine anemia decreased

Card : 3/4

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